

Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-51 (Cancelled)

52 (Currently Amended). The peptide of Claim ~~50-100~~ or ~~51-103~~, wherein said peptide is ~~dimerized~~ a dimer.

53 (Currently Amended). The peptide of Claim ~~50-100~~ or ~~51-103~~ wherein said peptide is ~~multimerized~~ a multimer.

54 (Currently Amended). The peptide of Claim 53, wherein said peptide is ~~trimerized~~ a trimer.

55 (Currently Amended). The peptide of Claim ~~50-100~~ or ~~51-103~~, wherein said peptide is conformationally constrained.

56 (Currently Amended). The peptide of Claim 55, wherein said peptide is cyclized.

57 (Currently Amended). The peptide of Claim ~~50-100~~ or ~~51-103~~, wherein said peptide has ~~further comprising~~ an N-terminal lauryl-cysteine (LC) and/or a C-terminal cysteine.

58 (Currently Amended). The peptide of Claim ~~50-100~~ or ~~51-103~~, wherein said peptide has ~~further comprising~~ an N-terminal and C-terminal cysteine.

59 (Currently Amended). The peptide of Claim 58,
wherein ~~the said peptide comprises~~ has an intramolecular
disulfide bridge.

60 (Currently Amended). The peptide of Claim ~~50-100~~
or ~~51-103 further comprising~~ wherein said peptide has an N-
terminal and a C-terminal D-amino acid residue.

61 (Previously Presented). The peptide of Claim 60,
wherein the D-amino acid is D-alanine.

62 (Currently Amended). The peptide of Claim ~~10050~~
or ~~10351, wherein said peptide has comprising~~ an N-terminal
acetyl group.

63 (Currently Amended). The peptide of Claim ~~10050~~
or ~~10351, wherein said peptide has further comprising~~ a C-
terminal D-amino acid residue.

64 (Previously Presented). The peptide of Claim 63,
wherein the D-amino acid is D-alanine.

65 (Currently Amended). An isolated peptide
consisting of the amino acid sequence of SEQ. ID NO.:1 wherein
said peptide does not have toxin agonist activity and is
capable of antagonizing toxin-mediated activation of T
~~lymphocytes~~ T-lymphocytes.

66 (Currently Amended). An isolated peptide
consisting of the amino acid sequence of SEQ. ID NO.:2 wherein
said peptide does not have toxin agonist activity and is

capable of antagonizing toxin-mediated activation of \mathbb{T}
~~lymphocytes~~T-lymphocytes.

67 (Currently Amended). An isolated peptide
consisting of the amino acid sequence of SEQ. ID NO.:3 wherein
said peptide does not have toxin agonist activity and is
capable of antagonizing toxin-mediated activation of \mathbb{T}
~~lymphocytes~~T-lymphocytes.

68 (Currently Amended). An isolated peptide
consisting of the amino acid sequence of SEQ. ID NO.:4,
wherein said peptide does not have toxin agonist activity and
is capable of antagonizing toxin-mediated activation of \mathbb{T}
~~lymphocytes~~T-lymphocytes.

69 (Currently Amended). An isolated peptide
consisting of the amino acid sequence of SEQ. ID NO.:5 wherein
said peptide does not have toxin agonist activity and is
capable of antagonizing toxin-mediated activation of \mathbb{T}
~~lymphocytes~~T-lymphocytes.

70 (Currently Amended). An isolated peptide
consisting of the amino acid sequence of SEQ. ID NO.:6 wherein
said peptide does not have toxin agonist activity and is
capable of antagonizing toxin-mediated activation of \mathbb{T}
~~lymphocytes~~T-lymphocytes.

71. (Currently Amended). An isolated peptide
consisting of the amino acid sequence of SEQ. ID NO.:7 wherein

said peptide does not have toxin agonist activity and is capable of antagonizing toxin-mediated activation of \mathbb{T} lymphocytes T-lymphocytes.

72 (Currently Amended). An isolated peptide consisting of the amino acid sequence of SEQ. ID NO.:8 wherein said peptide does not have toxin agonist activity and is capable of antagonizing toxin-mediated activation of \mathbb{T} lymphocytes T-lymphocytes.

73 (Currently Amended). An isolated peptide consisting of the amino acid sequence of SEQ. ID NO.:9 wherein said peptide does not have toxin agonist activity and is capable of antagonizing toxin-mediated activation of \mathbb{T} lymphocytes T-lymphocytes.

74 (Currently Amended). An isolated peptide consisting of the amino acid sequence of SEQ. ID NO.:10 wherein said peptide does not have toxin agonist activity and is capable of antagonizing toxin-mediated activation of \mathbb{T} lymphocytes T-lymphocytes.

75 (Currently Amended). An isolated peptide consisting of the amino acid sequence of SEQ. ID NO.:11 wherein said peptide does not have toxin agonist activity and is capable of antagonizing toxin-mediated activation of \mathbb{T} lymphocytes T-lymphocytes.

76 (Currently Amended). A composition which inhibits pyrogenic exotoxin-mediated activation of T-lymphocytes comprising an isolate comprising an isolated and purified peptide ~~having an amino acid sequence homologous to an amino acid sequence of a domain of a pyrogenic exotoxin which domain forms a central turn in the exotoxin starting within β strand 7 and connecting the β strand 7, via short β strand 8, to α helix 4, and ending within α helix 4, based on the domain numbering of SEB, wherein said peptide does not have toxin agonist activity and is capable of antagonizing toxin mediated activation of T lymphocytes, in accordance with Claim 100~~ in an amount effective to inhibit exotoxin-induced expression of an RNA encoded by the IL-2, IFN- γ , and/or TNF- β genes, and a carrier.

77 (Previously Presented). The composition of Claim 76, wherein the peptide has a sequence selected from the group consisting of SEQ. ID NO.:1, SEQ. ID NO.:2, SEQ. ID NO.:3, SEQ. ID NO.:4, SEQ. ID NO.:5, SEQ. ID NO.:6, SEQ. ID NO.:7, SEQ. ID NO.:8, SEQ. ID NO.:9, SEQ. ID NO.:10, and SEQ. ID NO.:11.

78 (Previously Presented). The composition of Claim 76, wherein the peptide has a sequence selected from the group consisting of SEQ. ID NO.:2, SEQ. ID NO.:6, SEQ. ID NO.:7,

Appln. No. 09/150,947

Amdt. dated September 12, 2005

Reply to Office action of March 11, 2005

SEQ. ID NO.:8, SEQ. ID NO.:9, SEQ. ID NO.:10 and SEQ. ID NO.:11.

79 (Previously Presented). The composition of Claim 76, wherein the peptide has the sequence of SEQ. ID NO.:2.

80 (Currently Amended). An immunogenic composition for eliciting antibodies that block pyrogenic exotoxin mediated activation of T-lymphocytes comprising an isolated and purified peptide ~~having an amino acid sequence homologous to an amino acid sequence of a domain of a pyrogenic exotoxin which domain forms a central turn in the exotoxin starting within β strand 7 and connecting the β strand 7, via short β strand 8, to α helix 4, and ending within α helix 4, based on the domain numbering of SEB, wherein said peptide does not have toxin agonist activity and is capable of antagonizing toxin mediated activation of T lymphocytes, in accordance with Claim 100~~ in an amount effective to elicit said antibodies, and a carrier.

81 (Previously Presented). The immunogenic composition of Claim 80, further comprising an adjuvant selected from the group consisting of proteosomes, KLH, alum and mixtures thereof.

82 (Previously Presented). The immunogenic composition of Claim 80, wherein the peptide has a sequence selected from the group consisting of SEQ. ID NO.:1, SEQ. ID

Appln. No. 09/150,947

Amdt. dated September 12, 2005

Reply to Office action of March 11, 2005

NO.:2, SEQ. ID NO.:3, SEQ. ID NO.:4, SEQ. ID NO.:5, SEQ. ID NO.:6, SEQ. ID NO.: 7, SEQ. ID NO.:8, SEQ. ID NO.:9, SEQ. ID NO.:10 and SEQ. ID NO.:11.

83 (Previously Presented). The immunogenic composition of Claim 80, wherein the peptide has a sequence selected from the group consisting of SEQ. ID NO.:2, SEQ. ID NO.:6, SEQ. ID NO.: 7, SEQ. ID NO.:8, SEQ. ID NO.:9, SEQ. ID NO.:10 and SEQ. ID NO.:11.

84 (Previously Presented). The immunogenic composition of Claim 80, wherein the peptide has the sequence of SEQ. ID NO.:2.

85 (Currently Amended). An immunogenic composition for eliciting protective immunity against toxic shock comprising an isolated and purified peptide ~~having an amino acid sequence homologous to an amino acid sequence of a domain of a pyrogenic exotoxin which domain forms a central turn in the exotoxin starting within β strand 7 and connecting the β strand 7, via short β strand 8, to α helix 4, and ending within α helix 4, based on the domain numbering of SEB,~~ wherein said peptide does not have toxin agonist activity and is capable of antagonizing toxin mediated activation of T lymphocytes in accordance with Claim 100 in an amount effective to elicit said protective immunity, and a carrier.

86-93 (Cancelled)

94 (Currently Amended). The peptide of Claim ~~88~~103, wherein the peptide is capable of eliciting antibodies that block pyrogenic exotoxin-mediated activation of T-lymphocytes.

95-99 (Cancelled)

100 (New). An isolated and purified peptide consisting of:

a) a peptide consisting of an amino acid sequence which is within a domain of a pyrogenic exotoxin which domain forms a central turn in the exotoxin and includes β -strand 7, short β -strand 8, and α -helix 4, based on the domain numbering of *Staphylococcus aureus* enterotoxin B (SEB), said sequence starting within or immediately after β -strand 7 and ending within α -helix 4, wherein said isolated peptide does not have toxin agonist activity and is capable of antagonizing toxin-mediated activation of T-lymphocytes;

b) a peptide having at least 25% homology with said peptide of a), wherein the resultant peptide does not have toxin agonist activity and is capable of antagonizing toxin mediated activation of T-lymphocytes;

c) a peptide of a) or b) that is extended at the N-terminus and/or the C-terminus by one or two naturally occurring or synthetic amino acid residues, or by an organic moiety that is not a naturally-occurring or synthetic amino acid residue, wherein the resultant peptide does not have

toxin agonist activity and is capable of antagonizing toxin mediated activation of T-lymphocytes;

d) a dimer or multimer of a), b), or c), wherein the resultant peptide does not have toxin agonist activity and is capable of antagonizing toxin mediated activation of T-lymphocytes; or

e) a peptide of a), b) or c) in a constrained conformation, wherein the resultant peptide does not have toxin agonist activity and is capable of antagonizing toxin mediated activation of T-lymphocytes.

101 (New). A peptide in accordance with Claim 100, wherein said peptide of a) consists of a dodecamer that is part of said domain consisting of amino acids 150-161, using the amino acid number of SEB.

102 (New). The peptide of Claim 100, wherein said peptide of b) is the peptide of a) having insertions, deletions or substitutions of up to three amino acids, wherein the resultant peptide does not have toxin agonist activity and is capable of antagonizing toxin mediated activation of T-lymphocytes.

103 (New). An isolated and purified peptide consisting of:

a) a peptide of the amino acid sequence

Lys Lys Xaa Xaa Xaa Xaa Gln Glu Leu Asp (SEQ.

ID NO.:13,

Xaa Xaa Lys Lys Xaa Xaa Xaa Xaa Gln Glu Leu Asp

(SEQ. ID NO.:14) or

(Thr or Tyr) Xaa Lys Xaa Xaa Xaa Xaa Xaa Xaa

Glu Xaa Asp (SEQ. ID NO.:15),

wherein said peptide does not have toxin agonist activity and is capable of antagonizing toxin mediated activation of T-lymphocytes;

b) a peptide of a) that is extended at the N-terminus and/or the C-terminus by one or two naturally occurring or synthetic amino acid residues, or by an organic moiety that is not a naturally-occurring or synthetic amino acid residue, wherein the resultant peptide does not have toxin agonist activity and is capable of antagonizing toxin mediated activation of T-lymphocytes;

c) a dimer or multimer of a), or b), wherein the resultant peptide does not have toxin agonist activity and is capable of antagonizing toxin mediated activation of T-lymphocytes; or

d) a peptide of a), or b) in a constrained conformation, wherein the resultant peptide does not have toxin agonist activity and is capable of antagonizing toxin mediated activation of T-lymphocytes.

Appln. No. 09/150,947

Amdt. dated September 12, 2005

Reply to Office action of March 11, 2005

104 (New). A peptide in accordance with Claim 103, wherein said peptide of a) is SEQ. ID NO.:13.

105 (New). A peptide in accordance with Claim 103, wherein said peptide of a) is SEQ. ID NO.:14.

106 (New). A peptide in accordance with Claim 103, wherein said peptide of a) is SEQ. ID NO.:15.

107 (New). A peptide in accordance with Claim 103, wherein the peptide of a) is SEQ. ID NO.:2.

108 (New). A peptide in accordance with Claim 103, wherein the peptide of a) is SEQ. ID NO.:4.

109 (New). The peptide of Claim 100 or 103, wherein said peptide of a) is SEQ. ID NO.:1.

110 (New). The peptide of Claim 100 or 103, wherein said peptide of a) is SEQ. ID NO.:3.

111 (New). A composition comprising a peptide in accordance with Claim 100 or 103 and a carrier.

112 (New). The composition of Claim 76, wherein, in said peptide, said peptide of a) consists of a dodecamer that is part of said domain consisting of amino acids 150-161, using the amino acid number of SEB.

113 (New). The immunogenic composition of Claim 80, wherein, in said peptide, said peptide of a) consists of a dodecamer that is part of said domain consisting of amino acids 150-161, using the amino acid number of SEB.